

ROSTOVTSSEV, N.F., akademik, red.; KOVALENKO, Ya.R., prof., red.;
 SERGEYEV, S.P., red.; MOISEYEV, I.A., red.; SARKISOV, A.Kh.,
 prof., doktor biolog.nauk, red.; MITROPANOVA, V.P., tekhn.red.

[Raising and housing young farm animals; materials of the
 Out-Session of the Department of Animal Husbandry of the Lenin
 All-Union Academy of Agricultural Sciences, Kurgan, July 29th-
 August 1st, 1960] Vyrashchivanie i sokhranenie molodniaka
 sel'skokhoziaistvennykh zhiivotnykh; sbornik materialov vyezdnogo
 plenuma otdeleniya zhiivotnovodstva VASKhNIL, sostoiavshegosia
 v g.Kurgane s 29 iul'ia po 1 avgusta 1960 g. Kurgan, Izd-vo
 gazety "Sovetskoe Zaural'e," 1961. 273 p.

(MIRA 14:4)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni
 V.I.Lenina. 2. Otdeleniye zhiivotnovodstva Vsesoyuznoy akademii
 sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Rostovtsev).
3. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh
 nauk imeni V.I.Lenina i Vsesoyuznyy institut eksperimental'noy
 veterinarii (for Kovalenko). 4. Vsesoyuznyy institut eksperimental'-
 noy veterinarii (for Sarkisov).

(Stock and stockbreeding)

ROSTOVTSEV, N.F., akademik

Pasture and feed lot fattening of young Red Steppe cattle.
Zhivotnovodstvo 23 no.7:74-76 JI '61. (MIRA 16:2)
(Beef cattle—Feeding and feeds)

ROSTOVTSEV, N.F., doktor sel'skokhoz. nauk

Theoretical and practical bases for increasing the meat
productivity of cattle. Zhivotnovodstvo 24 no.6:19-25
Je '62. (MIRA 17:3)

1. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'sko-
khozyaystvennykh nauk imeni Lenina.

SISAKYAN, N.M., akademik, glav. red.; ROSTOVTSEV, N.F., akademik, zam. glav. red.; BUKIN, V.N., zasl. deyatel' nauki i tekhniki RSFSR, doktor biol. nauk, zam glav. red.; MOZGOV, I.Ye., akademik, red.; KRASIL'NIKOV, N.A., red.; RAKITIN, Yu.V., red.; OVSYANNIKOV, A.I., red.; SHMANENKOV, N.A., doktor sel'khoz. nauk, red.; SAVEL'YEV, I.K., kand. sel'khoz. nauk, red.; KOCHEREZHKIN, V.G., kand. biol. nauk, red.; NIKHLIN, E.D., ved. red.; KOLPAKOVA, Ye.A., red. izd-va; RYLINA, Yu.V., tekhn. red.

[Problems of increasing the use of chemicals in animal husbandry; using biologically active preparations] Voprosy khimizatsii zhivotnovodstva; primeneniye biologicheskikh aktivnykh preparatov. Sbornik rabot. Moskva, Izd-vo AN SSSR, 1963. 303 p. (MIRA 17:1)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Rostovtsev, Mozgov). 3. Chlen-korrespondent AN SSSR (for Krasil'nikov, Rakitin). 4. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Ovsyannikov).

(Stock and stockbreeding—Feeding and feeds)
(Agricultural chemistry)

ROSTOVTSEV, N.F., akademik, red.; DOBYCHINA, I.N., red.; BRUSANOV,
~~N.A.~~, red.; BALLOD, A.I., tekhn. red.

[Amino acid nutrition of swine and poultry] Aminokislotnoe
pitaniye svinei i ptitsy; materialy. Pod red. N.F. Rostovtseva.
Moskva: Sel'khozizdat, 1963. 218 p. (MIRA 16:12)

1. Soveshchaniye po voprosam aminokislotnogo pitaniya sel'-
skokhozyaystvennykh zhivotnykh, Ist. Khar'kov, 1962. 2. Vse-
soyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I. Le-
nina (for Rostovtsev).

(Swine--Feeding and feeds) (Poultry--Feeding and feeds)
(Amino acids)

ROSTOVTSEV, N.F., dr agric. sc., akad.

Address by N.F. Rostovtsev. 7es2 probl nauk roln no.43:9-11 '63.

1. All-Union Academy of Agricultural Sciences, Moscow.

ROSTOVTSSEV, N.F., akademik

Role of chemistry in the increase of the productivity of animal husbandry. Zhur. VKHO 8 no.6:605-611 '63. (MIRA 17:2)

1. Vsesoyuznyy akademiya sel'skokhozyaystvennykh nauk imeni Lenina.

ROSTOVTSEV, N.F., akademik, red.; NECHAYEVA, Ye.G., red.

[Problems of veterinary hygiene] Problemy veterinarnoi
sanitarii. Pod red. N.F.Rostovtseva. Moskva, lzd-vo
"Kolos," 1964. 316 p. (MIRA 17:8)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk
imeni V.I.Lenina. 2. Vsesoyuznaya akademiya sel'skokho-
zyaystvennykh nauk imeni V.I.Lenina (for Rostovtsev).

ROSTOVTSSEV, N.F., akademik; KRAPIVNITSKIY, V.Z.

Meat productivity of young Red Steppe cattle and their crosses
with Charolais cattle. Dokl. Akad. sel'khoz. nauk no.3:27-31

(MIRA 18:5)

Mr '65.

1. Sibirskiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.

3(1)

SOV/20-127-6-18/51

AUTHOR: Rostovtsev, N. M.

TITLE: On the Role of Cavitation in the Supersonic Treatment of Solids

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1210-1212 (USSR)

ABSTRACT: A special chamber, the scheme of which is shown in figure 1, was developed for carrying out the supersonic treatment at an increased pressure. Hard glass and plastic aluminum were investigated, the treatments were carried out in suspensions of boron carbide in water, in alcohol, and in a saturated common-salt solution. The quantity of material removed was measured in dependence on the pressure. In two diagrams (Fig 2), the measurement results are compiled. It is shown that from a certain pressure, depending on the material, a further increase in pressure has no influence on the quantity of material removed. From a consideration of the hydrostatic pressure, and of the amplitudes of the sound pressure, the cavitation pressures of the three solutions are calculated, and it is shown that these pressures agree with the above-mentioned pressures. This shows that the pressure, at which a maximum of material is removed, only depends on the acoustic

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SOV/20-127-6-18/51

On the Role of Cavitation in the Supersonic Treatment of Solids

properties of the liquids. There are 2 figures and 8 references,
7 of which are Soviet.

ASSOCIATION: Orlovskiy gosudarstvennyy pedagogicheskiy institut
(Orel State Pedagogical Institute)

PRESENTED: January 30, 1959, by P. A. Rebinder, Academician

SUBMITTED: January 2, 1959

Card 2/2

S/170/60/003/03/19/034
B014/B007

AUTHOR: Rostovtsev, N. M.

TITLE: The Change of the Inherent Frequency of Magnetostriction
Vibrators by Additional Masses

PERIODICAL: Inzhenerno-fizicheskii zhurnal, 1960, Vol. 3, No. 3,
pp. 110-112

TEXT: In order to be able to carry out measurements within a large ultrasonic range (e.g. 10-40 kc/sec) a comparatively large number of vibrators (roughly 10) must be used. In this paper a method is described, by means of which this large number of vibrators may be reduced to about 2 to 3, and in which, by means of additional masses attached to the vibrators, the eigenfrequencies are changed. The author first gives formula (1) for the calculation of the eigenfrequency of a vibrator, when a mass M is attached to the vibrator. This formula which was derived by D. Reley (Ref.2) holds for bar vibrators of cylindrical shape. For vibrators of the window-type (Fig. 1) the analogous formula (2) is derived. By means of formula (5) it is possible to calculate the mass, which must be added to the vibrator with the eigenfrequency ν_0 in order to obtain the frequency ν .

Card 1/2

✓c

The Change of the Inherent Frequency of
Magnetostriction Vibrators by Additional
Masses

S/170/60/003/03/19/034
B014/B007

A comparison between experimental results and calculated values is given in Table 1. It shows the usefulness of the formulas given. Fig. 2 shows the photograph of such a vibrator. There are 2 figures, 1 table, and 4 references: 3 Soviet and 1 German.

ASSOCIATION: Pedagogicheskiy institut, g. Orel
(Pedagogical Institute, City of Orel)

VC

Card 2/2

PHASE I BOOK EXPLOITATION 804/5207

Vsesoyuznyye konferentsiya professorov i prepodavateley pedagogicheskikh institutov. Prikladnye ultrazvukovye i isledovaniya veshchestva (Utilization of Ultrasonics for the Investigation of Matter). Moscow, Izd. MGPI, 1950. 267 p. 1,000 copies printed. (Series: Its Trudy, vyp. 11)

Za. (Title page): V.P. Nodrev, Professor and B.B. Kulyavtsev, Professor.

PURPOSE: This collection of articles is intended for physicists specializing in the physics of ultrasound.

COVERAGE: The collection of articles constitutes the transactions of the VII Congress on the Applications of Ultrasonics to the Study of Materials, which was held at the Moscow Oblast Pedagogical Institute named N.K. Krupskaya. Individual articles of the collection discuss various problems in the wave mechanics of ultrasound, the absorption and the propagation mechanics of ultrasonic waves in various media, the operating principles and design of generators and receivers of ultrasonic waves, the speed of sound and methods for its determination. Other articles deal with the applications of ultrasonics to investigations of the properties of materials. No personalities are mentioned. References accompany

- Zipir, A.D., and V.P. Yakovlev [Moscow Oblast Pedagogical Institute named N.K. Krupskaya]. Elementary theory of the crystal transformer operating as a Receiver 29
- Kuliyev, B.I. [Priborskiy Pedagogicheskii Institut-Tambov Pedagogical Institute]. Some Problems of the theory of crystal transformers 41
- Kuliyev, B.B. [Moscow Oblast Pedagogical Institute named N.K. Krupskaya]. Calculation of Speeds of Sound in Binary Mixtures 63
- Sonkevitsh, A.A. [Moscow Oblast Pedagogical Institute named N.K. Krupskaya]. Theory of Molecular Acoustics 71
- Olinak, A.A. [Moscow Oblast Pedagogical Institute named N.K. Krupskaya]. Nature of the Stokes Factor 85
- Kaspar'yants, A.A. [Odesk'skiy gosudarstvennyy universitet named I.I. Mechnikov]. Hydrodynamic theory of the propagation of sound waves in a liquid. 95
- Kurton, P., and A. Gullak [Department of Physics of the Agricultural College of Olstvy]. Verification of the interpretation of Acoustic Concentration Curves 99
- Zipir, A.D., and V.P. Yakovlev [Moscow Oblast Pedagogical Institute named N.K. Krupskaya]. Experimental Basis of Methods for Using Multiple Echo-Responses to Investigate Liquid Media at Low Frequencies 107
- Lushnikov, G.A., and B.K. Obukhov [Institut metallurgii AN SSSR - Institute of Metallurgy of the Academy of Sciences USSR]. Using the Electron-Acoustic Transformer for Investigating the Homogeneity of Metals 123
- Koslovskiy, M.M. [Odesk'skiy pedagogicheskii institut-Odessa Pedagogical Institute]. Measuring the Natural Frequency of Magnetostriction Vibrators With the Aid of Additional Masses 135
- Zhilyayev, V.V. [Tambov Pedagogical Institute]. The Electrostriction of a Liquid as a Source of Ultrasonic Oscillations 139
- Vodakovskiy, M.P., and Ye.I. Bayuk [Institut fiziki Zemli AN SSSR - Institute of Physics of the Earth AN USSR]. Investigation of Elastic Properties of Rock Samples Under All-Around Pressures of Up to 1000 kg/cm² 147
- Kusova, A.V., and B.B. Kulyavtsev [Moscow Oblast Pedagogical Institute named N.K. Krupskaya]. Propagation of Sound in Dispersive Media 155

Card 4/7

S/020/61/136/004/011/026
B019/B056

AUTHORS: Rostovtsev, N. M. and Yepifanov, G. I.
TITLE: Effect of Mechanical Properties of Solids Upon the Rate of
Their Ultrasonic Treatment
PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 4,
pp. 807 - 809

TEXT: In the introduction, the authors define the ultrasonic treatment of solids as a dispersion process, in which the molecular binding forces are overcome, and new free surfaces are produced. In addition, details of ultrasonic treatment are discussed in the introduction. The experiments, which are the subject of the present paper, were carried out with boron carbide suspensions in water at 17.5 kc/sec, a vibration amplitude of $A = 24\mu$, and a contact pressure of the ultrasonic device of 2 kg. In the first series of tests, the working rates of pure lead, aluminum, iron, copper, zinc, antimony, and glass are determined. From these results it follows that the working rates of materials being subjected to a considerable cross-section contraction on the fractured surface of the

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Effect of Mechanical Properties of Solids
Upon the Rate of Their Ultrasonic Treatment

S/020/61/136/004/011/026
B019/B056

tearing test are low (5-9 mg/min). The lower the cross-section contraction, the higher the working rate which, in the case of glass and antimony, attained a maximum. Although the tensile strength and the micro-hardness of lead is considerably lower than that of antimony, the working rate of antimony is nearly a hundred times as high as that of lead. In a second series of tests, the working rate of the lead-antimony alloy was studied as a function of its composition. These results confirm the above-mentioned opinion that the working rate of a material is the higher, the more brittle is the material. There are 1 figure, 2 tables, and 4 references: 3 Soviet and 1 US. ✓

ASSOCIATION: Orlovskiy gosudarstvennyy pedagogicheskiy institut (Orlov State Pedagogical Institute)

PRESENTED: July 21, 1960, by P. A. Rebinder, Academician

SUBMITTED: July 14, 1960

Card 2/2

1110

also 1063,1160

21564

S/O20/61/137/003/013/030
B104/B214

AUTHORS:

Rostovtsev, N. M. and Yepifanov, G. I.

TITLE:

The effect of surface-active media on the rate of super-sonic treating of solids

PERIODICAL:

Doklady Akademii nauk SSSR, v. 137, no. 3, 1961, 568-571

TEXT: An investigation was made of the dependence of the effect of active media in supersonic treating of solids on the media's mechanical properties in optimum concentration of sodium oleate in water; and oleic acid, and palmitic acid in benzene. The following substances were studied: a number of pure metals (Cu, Al, Fe. Pb. Zn. Sb), antimony-lead alloys, and carbon steel. The supersonic instrument carried out oscillations with a frequency of 17.5 kcps, amplitude 24μ , and surface pressure 2 kg. The cylindrical instrument had a diameter of 5 mm and was made of unhardened steel. The specimen was introduced in a special cuvette in which 0.5 cm³ of the solution to be studied was poured, and 150 mg of boron carbide powder with grain size 120 was added. The experiments were carried out at 18-20°C. The results are collected in Tables 1-3. It is seen that

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The effect of surface-active ...

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S/O20/61/137/003/013/030
B104/B214

the surface active additions affect mostly the hardened materials (Cu, Al, and Fe). Special reference is made to the slowed treating of lead caused by surface active media. From a discussion of the results it is concluded that the organic media are effective only in the treating of plastics and strengthened metals in which a marked brittleness is found. In metals with low recrystallization point the effectiveness of these media is small. Further experiments confirmed the long known strong dependence of the effect of surface active substances on their concentration. The results are shown in Figs. 1 and 2. Fig. 1 shows the machined material per minute (mg/min) as a function of the concentration and a clearly marked limiting value is seen. Fig. 2 shows the rate of treating as a function of the hydrostatic pressure; it is concluded from this that addition of surface active substances has no effect on the volume of the cavities formed under the instrument. There are 2 figures, 3 tables, and 7 Soviet-bloc references.

ASSOCIATION: Orlovskiy gosudarstvennyy pedagogicheskiy institut
(Orlov State Pedagogical Institute)

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The effect of surface-active ...

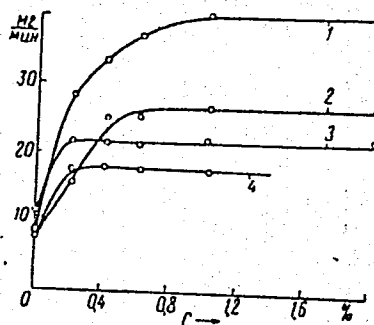
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S/020/61/137/003/013/030
B104/B214

PRESENTED: September 26, 1960, by P. A. Rebinder, Academician

SUBMITTED: September 12, 1960

Legend to Fig. 1: Rate of supersonic machining as a function of the concentration of sodium oleate in water. 1) Cu. 2) Fe. 3) Zinc. 4) Lead.



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B104/B214

Fig. 2: Effect of the external hydrostatic pressure on the rate of machining of Cu.
Legend: 1) Boron carbide suspension in pure water (v_0). 2) The same with 1% sodium oleate. 3) The ratio v/v_0 .

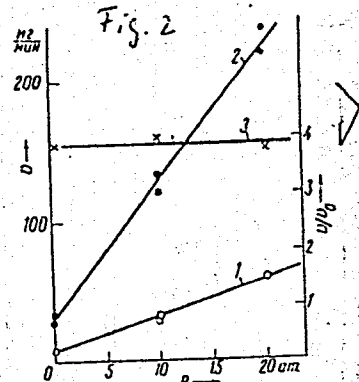


Table 1

	5	Алю- миний	Медь	Железо	Свинец	Цинк	Сурьма	Стекло
2	1% раств. олеата нат- рия в воде	—	350	230	120	90	0	0
3	2% раств. олеинов. кислоты в бензине	170	100	70	-100	0	0	0
4	2% раств. пальмитин. кислоты в бензине	170	100	60	-100	0	0	0

Legend to Table 1: 1) Effective action (%) of surface active media in supersonic treating of solid bodies. 2) 1% sodium oleate in water. 3) 2% oleic acid in benzene. 4) 2% palmitic acid in benzene. 5) From left to right: Al, Cu, Fe, Pb, Zn, Sb, Glass.
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B104/B214

Table 2: Effectiveness of the action of a 1% solution of sodium oleate in water in supersonic machining of Pb-Sb alloy. Legend: 1) Effect in %. 2) Amount of Sb in the alloy

Таблица 2

Эффективность действия 1% раствора олеата натрия в воде при ультразвуковой обработке сплавов свинец-сурьма

1	2 Содержание сурьмы в сплаве (%)						
	0	13	20	40	60	80	100
Эффективность действия (%)	120	90	65	50	30	15	0

Table 3: Effectiveness of the action of a 1% solution of sodium oleate in water in supersonic machining of steels. Legend: 1) Effectiveness of the action in %. 2) Industrially pure iron. 3) У-8 (U-8) steel, unhardened. 4) U-8 steel hardened.

Table 3	2 Техн. чист. железо	3 Сталь У-8 незакален.	4 Сталь У-8 закален.
1 Эффективность действия (%)	230	60	30

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S/139/61/000/004/021/023
E194/E135

1110

AUTHORS:

Rostovtsev, N.M., Yepifanov, G.I., and Zhadin, N.P.

TITLE:

An investigation of the role of cavitation during
ultrasonic working of materials

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Fizika.
no. 4, 1961. 157-162

TEXT:

Differences of opinion exist about the role of
cavitation in the ultrasonic machining of materials. Some authors
consider cavitation to have an important positive effect but the
present authors think that it has a negative effect, and the work
here described was carried out to study the point. A series of
tests was run with the application of pressures up to 50 atm to
reduce cavitation. The amplitude of oscillation of the tool was
observed through a measuring microscope. The materials worked were
brittle glass and plastic aluminium pressed to the tool with a
force of about 2 kg. The tool was a 5-mm diameter cylinder of
grade 8 (U-8) steel working in suspensions of boron carbide in
water, ethanol and a saturated solution of sodium chloride in water
at a temperature of about 20 °C. The tests were made at a

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E194/E135

An investigation of the role of

frequency of 17 kc/s and an amplitude of 6 microns. The working was assessed by the loss of weight of the sample. Glass samples were worked for two minutes, and aluminium for 3.5 minutes. If cavitation played a positive part, increasing the pressure would reduce the amount of material removed by reducing cavitation. In fact, the opposite was observed and in each case the amount of material used rose steadily with pressure until a certain limit value was reached beyond which no further increase occurred. The pressure at which this occurred was calculated to be equal to the pressure required to suppress cavitation. Tests were then made at reduced pressure, with the object of increasing the cavitation at the frequencies of 17 and 9.5 kc/s and amplitudes ranging from 4.7 to 8.4 microns: the temperature was maintained at 20 °C and vacuum was applied to the vessel. In all cases reduction of the pressure caused a linear reduction in the amount of material removed, which supports the view that cavitation has a negative effect. The influence of temperature was then studied on the principle that as the material neared its boiling point cavitation would increase. These tests were made at a pressure of

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An investigation of the role of..... S/139/61/000/004/021/023
E194/E135

1 atm and a frequency of 9.5 kc/s with an amplitude of 8 microns. In the case of water and benzene the rate of working first rises and then reaches a maximum at a temperature of 55 °C for water and 35 °C for benzene, and then falls sharply as the boiling point is reached. In the case of ether (boiling point 34.5 °C) the rate of working decreases rapidly as the temperature is raised. The rising part of the curves for water and benzene is attributed to reduction of viscosity at a temperature range where there is little change in vapour pressure; the subsequent fall is attributed to increase in vapour pressure promoting cavitation. A further series of tests was run in which both the pressure and temperature were varied simultaneously so as to maintain constant the difference between the hydrostatic pressure of the fluid and the vapour pressure at the given temperature. Under these circumstances the rising part of the curve for water is the same as before but there is no dropping off as the boiling point is reached; the curve continues to rise, presumably because cavitation is suppressed by the increasing pressure. It is concluded that cavitation clearly has a negative effect on

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S/139/61/000/004/021/023
E194/E135

An investigation of the role of

ultrasonic machining of metal and that, for any given fluid at atmospheric pressure, there is an optimum working temperature. There are 4 figures and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc. The English language reference reads as follows: Ref. 8: E.A. Neppiras. Metalworking production, V.100, No.30, 1956.

ASSOCIATION: Orlovskiy pedagogicheskiy institut
(The Orlov Pedagogical Institute)

Institut fizicheskoy khimii AN SSSR
(Institute of Physical Chemistry, AS USSR)

SUBMITTED: June 13, 1960

Card 4/4

ROSTOVTSEV, N. M.

Cand Phys-Math Sci - (diss) "Study of the process of ultrasonic dispersion of solid bodies." Orel, 1961. 11 pp; (Ministry of Education RSFSR, Orlovo State Pedagogical Inst, Chair of General Physics); 150 copies; price not given; (KL, 10-61 sup, 205)

24, 1960

S/058/62/000/003/060/092
A061/A101

AUTHOR: Rostovtsev, N. M.

TITLE: Ultrasonic material treatment tests at increased hydrostatic pressure

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1962, 44, abstract 3G355 (Sb. "Primeneniye ul'traakust. k issled. veshchestva", no. 12, Moscow, 1960, 53-63)

TEXT: The rate of treatment of materials was found to rise rapidly with the increase of hydrostatic pressure. There are 11 references.

[Abstracter's note: Complete translation]

1/3

Card 1/1

L 28033-66 EWP(k)/EWT(m)/EWP(t)/ETI IJP(c) JD/HW/GS

ACC NR: AT6013169

SOURCE CODE: UR/0000/60/000/000/0053/0063

AUTHOR: Roatovtsev, N. M.

ORG: none

TITLE: Ultrasonic machining of materials at increased hydrostatic pressure

SOURCE: Moscow. Oblastnoy pedagogicheskiy institut. Primeneniye ul'traakustiki k issledovaniyu veshchestva, no. 12, 1960, 53-63

TOPIC TAGS: ultrasonic machining, hydrostatic pressure

ABSTRACT: An experimental investigation has been carried out on the cavitation role in ultrasonic machining of materials at increased hydrostatic pressure. As has been shown (L. Bergman, Ul'trazvuk, M., IL, 1956), cavitation can be decreased and even completely extinguished by increased hydrostatic pressure. The rapid machining of materials with increased hydrostatic pressure can be used in lot production during ultrasonic machining of parts made of hard and brittle materials, particularly in drilling deep holes. Orig. art. has: 10 figures, 2 formulas, and 1 table. [MT]

SUB CODE: 11/ SUBM DATE: 31oct60/ ORIG REF: 006/ OTH REF: 005

Card 1/1 CC

COMMON ELEMENTS		PROCESSES AND PROPERTIES	
ROSTOVTSSEV N. N.		8	
ca			
Nitrogen-containing gases in the Kayagent (Daghestan) area. I. O. Brod and N. N. Rostovtsev. <i>Natural Gases</i> U. S. S. R. No. 4/5, 138-47 (1932).—These gases contain CO₂ 3.4-4.7, CH₄ 0.7, H₂S 0.5, O₂ 0.9 and N₂ + noble gases 94.8%. A. A. Podgorny.			
ASB-514 METALLURGICAL LITERATURE CLASSIFICATION			
GROUPS		CLASSIFICATION	

KAZARINOV, V.P., otv.red.vypuska; ROSTOVTSEV, N.N., glavnyy red.; SEGAL', Z.G., vedushchiy red.; GURARI, F.G., zamestitel' glavnogo red.; AMSHINSKIY, N.N., red.; DERBIKOV, I.V., red.; KALUGIN, A.S., red.; MALIKOV, B.N., red.; MIKUTSKIY, S.P., red.; SUKHOV, S.V., red.; TESLENKO, Yu.V., red.; UMANTSEV, D.F., red.; GAVRILOVA, N.V., red.; SAFRONOVA, I.M., tekhn. red.

[Geology and prospects for finding oil and gas in the northwestern part of the Siberian Platform.] Geologicheskoe stroenie i perspektivy neftegazonosnosti severo-zapada Sibirskoi platformy. Leningrad, Gostoptekhi-zdat, 1963. 183 p. [Trudy Sibirskogo nauchno-issledovatel'skogo instituta geologii, geofiziki i mineral'nogo syr'ya, no.28.] (MIRA 16:11)

ROSTOVTSKY, N. H.

"The Geological History of the Jurassic Period in Eastern Part of the Greater
Caucasus," Iz. Nauk SSSR, Ser. Geol., No. 3, 1946;

"The Upper Paleozoic Layer of the Northwestern Part of the Kelt'mensk Bank," Sov.
Geol. No. 28, 1948.

ROSTOVTSEV, N. N.

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USSR/Geology

1948

Stratification

Petrology

"The Upper Paleozoic Layer of the Northwestern Part of the Kel'tmansk Bank," N. N. Rostovtsev, 17 pp

"Sovet Geolog" No 28

Results of investigations conducted in basins of northern and southern Kel'tma Rivers, Vychehda and Kam tributaries. Descriptions of upper Permian, lower Permian (Kungur and Artinsk stages), upper carboniferous and middle carboniferous layers.

69T59

ROSTOVTSSEV, N.N.

Geological structure and oil- and gas-bearing possibilities of the
West Siberian Lowland. Inform.sbor.VSEGEI no.2:3-11 '55.

(MLRA 9:11)

(Siberia, Western--Petroleum geology)

(Seberia, Western--Gas, Natural--Geology)

~~ROSTOVTSSEV, N. N.~~

Tectonics of the Chulym-Yenisey region. Mat.VSEGEI no.8:
294-299 '56. (MLRA 10:2)

(Chulym Valley--Geology, Structural)
(Yenisey Valley--Geology, Structural)

ROSTOVTSEV, N.N.; PANOVA, V.G.

Practical directions for carrying out certain computations in
processing results of analyses of the chemical composition
of natural gases. Mat.VSEGEI no.18:155-168 '56. (MLRA 10:4)
(Gas, Natural--Analysis)

ROSTOVTSEV, N.N.

West Siberian Plain. Trudy VNIGRI no.96:107-152 '56.
(Siberia, Western--Geology, Stratigraphic) (MLRA 10:1)

ROSTOV TSEV, N.N.

SPIZHARSKIY, T.N., red.; TOLSTIKHINA, M.A., red.; BODYLEVSKIY, V.I., red.;
BOCH, S.G., red. [deceased]; VASILENKO, V.K., red.; DODIN, A.L., red.;
DOMRACHEV, S.M., red.; KRASNOV, I.I., red.; MELESHCHENKO, V.S., red.;
MENNER, V.V., red.; NIKIFOROVA, O.I., red.; OBRUCHEV, S.V., red.;
RZHONSNITSKAYA, M.A., red.; ROSTOV TSEV, N.N., red.; SAKS, V.N., red.;
SARYCHEVA, T.G., red.; FOMICHEV, V.L., red.; CHERNYSHEVA, N.Ye., red.;
YAKOVLEV, S.A., red.; RAGINA, G.M., vedushchiy red.; YASHCHURZHINSKAYA,
A.B., tekhn. red.

[Proceeding of the Interdepartmental Conference on the Development
of a Unified System for the Stratigraphy of Siberia; reports on the
stratigraphy of Mesozoic and Cenozoic deposits] Trudy Mezhvedomatven-
nogo soveshchaniya po razrabotke unifitsirovannykh stratigraficheskikh
skhem Sibiri; doklady po stratigrafii mezozoiskikh i kainozoiskikh ot-
lozhenii. Leningrad, Gos. nauchno-tekhn. izd-vo nef. i gorno-toplivnoi
lit-ry, Leningr. otd-nie, 1957. 575 p. (MIRA 11:6)

1. Mezhvedomstvennoye soveshchaniye po razrabotke unifitsirovannykh
stratigraficheskikh skhem Sibiri. Leningrad, 1956. 2. Vsesoyuznyy
geologicheskii nauchno-issledovatel'skiy institut (for Spizharskiy,
Tolstikhina, Boch, Dodin, Krasnov, Meleshchenko, Nikiforova, Rostov-
tsev, Fomichev, Chernysheva, Yakovlev). 3. Leningradskiy gornyy insti-
tut (for Bodylevskiy). 4. Vsesoyuznyy neftyanoy nauchno-issledovatel'-
skiy geologo-razvedochnyy institut (for Vasilenko, Domrachev). 5. Geolo-
gicheskii institut Akademii nauk SSSR (for Menner). 6. Laboratoriya
dokembriya Akademii nauk SSSR (for Obruchev). 7. Institut geologii
Arktiki (for Saks). 8. Paleontologicheskii institut Akademii nauk
SSSR (for Sarycheva) (Siberia--Geology, Stratigraphic)

ALESKEROVA, Z.T.; LI, P.F.; OSYKO, T.I.; ROSTOVTSSEV, N.N.; TOLSTIEHINA, M.A.

Stratigraphy of Mesozoic and Tertiary deposits of the West Siberian
Plain. Sov. geol. no. 55:145-172 '57. (MLRA 10:6)
(Siberia, Western--Geology, Stratigraphic)

ROSTOVTSKY, N. N.

3(5)

PHASE I BOOK EXPLOITATION

SOV/1638

Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut

Geologicheskoye stroyeniye i perspektivy neftegazonosnosti Zapadno-Sibirskoy nizmennosti (Geological Structure and the Oil-and Gas-bearing Possibilities of the West Siberian Plain) Moscow, Gosgeoltekhizdat, 1958. 390 p. (Series: Its: Trudy) 3,000 copies printed.

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Ed.: N.N. Rostovtsev; Compilers: Z.T. Aleskerova, G.S. Kritsuk, P.F. Li, I.V. Litvinenko, D.V. Osadchaya, A.S. Ostroumova, T.I. Osyko, O.V. Ravdonikas, N.N. Rostovtsev, T.N. Simonenko, M.A. Tolstikhina, B.E. Khesin; Ed. of Publishing House: N.I. Babintsev; Tech. Ed.: K.V. Krynochkina.

PURPOSE: This book is intended for petroleum geologists and economic planners in the oil and gas industry.

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Geological Structure (Cont.)

COVERAGE: This work, written by several geologists, describes the geology of the West Siberian Plain in relation to its oil and gas potential. It summarizes the results of the initial stage of the second period in the search for oil and gas in Western Siberia and indicates the direction to be taken in changing the approach from a general regional study to a detailed investigation of potential oil and gas areas. The rapidly developing industry, transportation, and agriculture in Siberia are requiring larger and larger quantities of liquid fuels. Only since 1949 has large-scale geological and exploratory drilling along with geophysical, hydrological, and special investigations been carried on. During this comparatively short period a large oilfield was discovered in Berezhovo on the Ob' River. It was definitely established that the West Siberian Plain is the repository of some of the world's largest artesian basins with large reserves of thermal (up to 120°C) calcium-chloride and other waters with a 1-60 g. mineralization, saturated with flammable gases, mainly methane. The Introduction contains a detailed listing of the various trusts, research institutes, surveys, and expeditions which have participated in the studies upon which this work is based. In addition, the names of individuals and their special contributions (stratigraphy, luminescent studies,

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Geological Structure (Cont.)

thermal studies in wells, surveying, etc.) is provided. Some 200 personalities are listed. There are 27 tables, the last of which on the composition of underground waters of the West Siberian Plain, extends for 85 pages. There are 336 references, of which 332 are Soviet, 2 German, 1 English, and 1 French.

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- hole. T.I. Osyko. Mal'tsevskaya borehole 2-R. D.V.
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- T.V. Dolinina), Lugovskaya and Uteshevskaya boreholes.
- D.V. Osadchaya (based on the materials of P.F. Li and
- T.V. Dolinina). Derbyshinskaya borehole. D.V. Osadchaya
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 Aptian (?) - Albion (carboniferous stratum). N.N. Rostovtsev.
 Aptian-Albion (Kliyskaya stage). N.N. Rostovtsev (after I.V. Lebedev and M.A. Tolstikhina) Cenomanian-Lower Turonian. Amber-bearing stratum. Z.T. Aleskerova. Cenomanian-Turonian (Simonovskaya stage) N.N. Rostovtsev (after A.P. Anan'yeva and M.A. Tolstikhina).
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AVAILABLE: Library of Congress

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6/17/59
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ALESKEROVA, Z.T.; YEGOROV, S.V.; OSYKO, T.I.; ROSTOVTSKY, N.N.;
DALMATOV, P.S., vedushchiy red.; GANNAD'YEVA, I.M., tekhn.red.

[Geology, hydrogeology, and oil and gas potentials of
the Petropavlovsk area in the West Siberian Plain, based
on deep drilling data] Geologicheskoe stroenie, gidrogeologiya
i perspektivy neftegazonosnosti Petropavlovskogo raiona
Zapadno-Sibirskoi nizmennosti po dannym glubokogo bureniya.
Leningrad, Gos.nauchn.-tekhn.izd-vo nef't.i gorno-toplivnoi
lit-ry Leningr.otd-nie, 1959. 117 p. (Leningrad, Vsesoiuznyi
geologicheskii institut. Trudy no.25). (MIRA 12:12)

(West Siberian Plain--Petroleum geology)
(West Siberian Plain--Gas, Natural--Geology)

ROSTOVTSSEV, N.N.; SIMONENKO, T.N.; UMANTSEV, D.F.

Structure of the folded basement of the West Siberian Plain.

Trudy SNIIGGIMS no.1:11-17 '59.

(MIRA 15:4)

(West Siberian Plain—Geology, Structural)

RAVDONIKAS, O.V.; ROZIN, A.A.; ROSTOVITSEV, N.N.

Study of underground waters of the West Siberian Plain based on
deep-drilling data. Trudy SNIIGGIMS no.1:106-119 '59. (MIRA 15:4)

(West Siberian Plain--Water, Underground)
(Logging (Geology))

ROSTOVTSEV, N.N.; SIMONENKO, T.N.

Oil and gas prospecting in the West Siberian Plain. Geol.nefti.i
gaza 3 no.6:8-13 Je '59. (MIRA 12:8)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki
i mineral'nogo syr'ya.

(West Siberian Plain--Petroleum geology)

(West Siberian Plain--Gas, Natural--Geology)

VASIL'YEV, V.G.; GRACHEV, G.I.; NEVOLIN, N.V.; OZERSKAYA, M.L.; PODOBA, N.V. Prínimali uchastiye: ALEKSEYCHIK, S.N.; GUSHKOVICH, S.N.; DIKENSHTEYN, G.Kh.; DZVELAYA, M.F.; DRABKIN, I.Ye.; IVANOVA, M.N.; KAZARINOV, V.P.; KALININA, V.V.; KOZLENKO, S.P.; MEDVEDEV, V.Ye.; PUSTIL'NIKOV, M.R.; ROSTOVTSSEY, N.N.; SKOBLIKOVA, G.I.; STEPANOV, P.P.; TITOV, V.A.; FOTIADI, E.E.; CHIRVINSKAYA, M.V.; SHMAROVA, V.P. GRATSIAKOVA, O.P., red.; BEKMAN, Y.I., vedushchiy red.; MUKHINA, E.A., tekhn.red.

[Manual for geophysicists in four volumes] Spravochnik geofizika v chetyrekh tomakh. Moskva, Gos.nauchno-tekhn.izd-vo nef. i gorno-toplivnoi lit-ry. Vol.1. [Stratigraphy, lithology, tectonics, and physical properties of rocks] Stratigrafiya, litologiya, tektonika i fizicheskie svoystva gornyykh porod. Pod red. O.P. Gratsianovoi. 1960. 636 p. (MIRA 14:1)
(Petroleum geology) (Gas, Natural--Geology)

VUKOLOV, Ye.A.; NEGOVSKIY, A.S.; ROSTOVTSEV, N.N.; KISL'ROD, L.I.;
MALYSHEV, V.I.; IORDANOVA, Z.A.; BOCHEK, F.I.

Melting of electrocorundum in a lined casing. Prom.energ.
15 no.3:18-19 Mr '60. (MIRA 13:6)
(Corundum)

ROSTOVTSEV, N.N.

Principles of compiling structural maps and tectonic plans of the
platform mantle of the West Siberian Plain. Trudy SNIIGGIMS no.7:
5-11 '61. (MIRA 16:7)

(West Siberian Plain—Geology, Structural—Maps)

GURARI, F.G.; KAZARINOV, V.P.; KAS'YANOV, M.V.; NESTEROV, I.I.;
ROSTOVTSEV, N.N.; ROVNIN, L.I.; RUDKEVICH, M.Ya.; TROFIMUK, A.A.;
ERV'YEV, Yu.G.; MIRONOV, Yu. K.

West Siberian Plain is a new oil and gas production center of
the U.S.S.R. Geol.i geofiz. no.10:3-15 '61. (MIRA 14:12)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki
i mineral'nogo syr'ya, Institut geologii i geofiziki Sibirskogo
otdeleniya AN SSSR, Novosibirsk, Tyumenskoye territorial'noye
geologicheskoye upravleniye i Novosibirskoye territorial'noye
geologicheskoye upravleniye.

(West Siberian Plain--Petroleum geology)

(West Siberian--Gas, Natural)

ROSTOVTSEV, N.N.

Conditions governing the formation of gas pools in the
Berezovo region of the West Siberian Plain. Trudy SNIIGGIMS
no.17:7-14 '61. (MIRA 15:9)
(Berezovo region (Tyumen' Province)--Gas, Natural--Geology)

EGATOV, V.I.; BOGOLEPOV, K.V.; KAZARINOV, V.P.; KALUGIN, A.S.; KOSOLOBOV,
N.I.; KOSYGIN, Yu.A.; KRASIL'NIKOV, B.N.; KRASNOV, V.I.; KUZNETSOV,
Yu.A.; KUZNETSOV, V.A.; LIZALEK, N.A.; ROSTOVTSEV, N.N.; SAKS, V.H.

In memory of Vadim Sergeevich Meleshchenko. Geol.i geofiz.
no.2:130-131 '62. (MIRA 15:4)
(Meleshchenko, Vadim Sergeevich, 1917-1961)

GURARI, F.G.; ROSTOVTSEV, N.N.; CHOCHIA, N.G.

Concerning the article of N.I.Buialov and others, "Classification
of predicted oil and gas reserves and method of rating them."
Sov.geol. 5 no.2:157-159 F '62. (MIRA 15:2)
(Petroleum geology) (Gas, Natural—Geology)
(Buialov, N.I.)

NESTEROV, Ivan Ivanovich, kand. geol.-miner. nauk; ROSTOVTSEV,
Nikolay Nikitich, doktor geol.-miner. nauk; RUDKEVICH,
Maks Yakovlevich, kand. geol.-miner. nauk; DESHKOV, S.I.,
red.; RAKITIN, I.T., tekhn. red.

[The petroleum of Siberia] Neft' Sibiri. Moskva, Izd-vo
"Znanie," 1963. 29 p. (Novoe v zhizni, nauke, tekhnike.
XII Seriya: Geologiya i geografiya, no.13) (MIRA 16:8)
(Siberia—Petroleum geology)

ROSTOVTSKY, E.M.

Determining the productivity of structures in oil- and gas-bearing regions. Geol. nefti i gaza 8 no.7:1-8 31 '64.

(MIRA 17:12)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya.

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ABSTRACT: The West Siberian lowland is a gigantic intraplateau depression of about 3.4 million square kilometers. There are two structural stages in its basement. The lower (first) stage is built up of folded structure consolidated in different ages—from Archean to Hercynian. The upper (second) stage is composed of slightly dislocated parageosynclinal Early Mesozoic and Paleozoic deposits which fill up intermontane depressions and form undulated nappes. The cover of the platform is constructed of thick (up to 4000—5000 meters) series of Meso-Cenozoic sandy-clay rocks. In the rocks of the second tectonic stage of the basement numerous oil and gas shows are known, but structural complexity and the great depths at which oil and gas occur make prospecting very difficult. It is usually done together with studies of oil and gas deposits in the platform mantle, which is considered to be

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the most promising oil- and gas-bearing formation. Within the West Siberian lowland two areas with different modes of mantle deposit occurrence are distinguished: the outer, with the basement lying at a depth of 2000 meters or less, and the inner, from 2000 to 4000—5000 meters deep. The outer area is characterized by nose-type highs sinking towards the center of the platform. The inner area is characterized by domination of closed structures. A great number of local elevations complicating larger structures is observed within both areas. All of them are very gentle (angle of flanks from 1° to 3°), with the base protrusion high in the core, noticeably flattening out or passing into structural noses or monoclines in the upper horizons of the mantle. Rhythmical alternation of thick, mainly sand-silt series with essentially clay series is characteristic of the mantle deposits. Almost all Jurassic and Lower Cretaceous sand-silt series are regionally petroliferous. In the section the following stratigraphic units are distinguished through productive deposits: 1) The Zavodoukovski clay-silt-sand series of Early-Middle Jurassic partly of Callovian age, up to 1500 meters thick, characterized by a great diversity of facies including continental deposits of various types—littoral, and, less frequently, marine deposits. Numerous small oil inflows and gas outbursts of short duration were obtained from sandstones of the Zavodoukovski series in the central part of the platform. The small Unst-Silga gas condensate field in the northern part of the Tomsk region is confined to this series. 2) The Maryanovka suite of black highly bituminous argillites, up to 100 meters thick, of Late Jurassic, partly Valanginian-Hauterivian age. Its base consists of a series of basal sandstones unpersistent in the strike, with numerous oil and gas shows. In the western Ural

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regions of the lowland, where these sandstones directly overlie the basement rocks and are up to 100 meters thick, 16 gas fields and 3 oil fields have been discovered. 3) The Kulomsino suite represented mainly by Valanginian clay rocks, passing in the northwest into the Alyaska suite of Valanginian-Hauterivian age. In the central regions of the lowland numerous oil shows and two oil fields have been revealed in the sandstones of the upper part of this formation. There are essentially sandstone deposits of the Tara (Upper Valanginian-Lower Hauterivian) and Varta (Hauterivian-Barremian) suites further up, which are the main productive formations in the central and northern regions of the lowland. Three oil fields and two gas fields, including large ones, have been discovered there. In the overlying Cretaceous, Paleogene, and Neogene sandy-clay deposits no oil or gas field is known. In the Okhteyevsk area a subcommercial gas spout has been obtained from Senonian sandstones. Oil and gas shows in Cretaceous deposits have been observed in a number of wells. Geochemical investigations have shown that the content of organic carbon and bitumen increases from marginal zones toward the center of the lowland in all productive strata of Jurassic and Lower Cretaceous age. The degree of bitumen reduction rises, and the degree of oil hypergenesis decreases in the same direction. The degree of mineralization and metamorphism of underground waters also rises from the marginal zones to the center of the lowland. A deviation from normal is observed in the Surgut district, where the degree of mineralization of Jurassic and Lower Cretaceous waters is reduced, and Neocomian oils have undergone considerable cryptohypergenesis. A study of oil and gas reservoirs in Jurassic and Lower Cretaceous deposits has shown deterioration of their properties from the marginal

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ACC NR: AT5028972

zones of the lowland towards its central regions. At the same time it has been established that paleotectonic conditions greatly affect the properties of reservoirs in Neocomian deposits. The thickest, highly permeable sand beds overlay arches of large consedigenous uplifts. A map of supposed oil and gas reserves on the West Siberian platform has been prepared, based on the results of an analysis of the data available on facial characteristics of rocks, hydrogeology, reservoir properties, geochemistry, distribution of the already known oil and gas fields and shows, etc. The central and northern regions of the lowland are the most promising areas. The data available indicate that the West Siberian lowland is one of the world's new oil and gas provinces. Orig. art. has: 3 figures. [Author's abstract.]

SUB CODE: 08/ SUBM DATE: 21Nov64/

Card 4/4

JLR

(N)

SOURCE CODE: UR/0000/02/000/000/0000

AUTHOR: Rostovtsev, N. N.; Surkov, V. S.; Umantsev, D. F.

ORG: none

TITLE: Geological and geophysical investigations in the west Siberian lowland

SOURCE: International Geological Congress. 22d, New Delhi, 1964. *Geologicheskiye rezul'taty prikladnoy geofiziki* (Geological results of applied geophysics); doklady sovetskikh geologov, problema 2. Moscow, Izd-vo Nedra, 1965, 111-117

TOPIC TAGS: geological ^{exploration} ~~structure~~, ~~lowland~~, ~~sediment~~, ~~deep drilling~~, ~~geophysics~~, earth gravity, tectonics, seismic prospecting

ABSTRACT: An analysis of recent geological studies of the west Siberian lowland is presented. Geotectonically, the west Siberian lowland forms the base of the Ural-Siberian Epihercynian platform. The geological structure of its deep-seated horizons is hidden under the overburden of Tertiary and Quaternary sediments and hence cannot be studied by geological surveying. The geological structure of such areas is now being studied by geophysical methods and deep drilling. The area of the lowland has been covered by aeromagnetic and gravity surveys, and a great amount of seismic and electrical prospecting has been conducted. Stratigraphic and exploratory holes were drilled at a number of points. This work made it possible to establish the principal features of the geological structure of the lowland, as a whole, and to

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investigate some of the areas in detail. The west Siberian platform consists of two structural stages: the folded basement and the sedimentary overburden. The aeromagnetic and gravity surveys have detected folded units of the platform basement which are reflected in Mesozoic and Cenozoic platform overburden as gentle rampart-like uplifts. The same investigations have established the heterogeneity of the basement and the presence of intermontane Paleozoic depressions in the basement. A sand and clay series of the Mesozoic and Cenozoic platform overburden proved to be favorable for seismological surveys, which, in combination with deep bore holes and the data of aeromagnetic and gravity surveys, made it possible to outline the general features of the geological structure of the overburden and to study some areas in detail. The seismic survey located and prepared for drilling numerous local highs many of which have proved to contain commercial reserves of oil and gas. Orig. art. has: 3 figures.

SUB CODE: 08/ SUBM DATE: 06Jan65/

Card 2/2

SIDORENKO, A.V., glav. red.; ROSTOVTSEV, N.N., red.; GURARI, F.G.,
red.; YEGOROV, S.V., red.

[Geology of the U.S.S.R.] Geologiya SSSR. Moskva, Nedra.
Vol. 44. 1964. 275 p. (MIRA 18:9)

SIDORENKO, A.V., glav. red.; ROSTOVTSEV, N.N., red.; KAZARINOV,
V.P., red.; OSYKO, T.T., red.; RUDKEVICH, M.Ya., red.

[Geology of the U.S.S.R.] Geologiya SSSR. Glav. red.
A.V.Sidorenko. Moskva, Nedra. Vol.44. Pt.1. 1964. 550 p.
(MIRA 18:5)

BOGOMYAKOV, G.P.; GURARI, F.G.; KAZAKOV, D.Ye.; MIRONOV, Yu.K.; NESTEROV, I.I.;
ROZHOK, N.G.; ROVNIN, L.I.; ROSTOVTSEV, N.N.; RUDKEVICH, M.Ya.; TSIBULIN,
L.G.; ERV'YE, Yu.G.

Prospecting for oil and gas in the West Siberian Plain. Geol. nef'ti
i gaza 8 no.9:43-48 S '64. (MIRA 17:11)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki
i mineral'nogo syr'ya, Tyumenskoye geologicheskoye upravleniye i
Novosibirskoye territorial'noye geologicheskoye upravleniye.

GURARI, F. G.; MIRONOV, Yu. K.; NESTEROV, I. I.; ROVIN, L. I.; ROSTOVTSSEV, N. N.;
RUDKEVICH, M. Ya.; ERV'YE, Yu. G.

"Oil and gas deposits of the West Siberian lowland."

report submitted for 22nd Sess, Intl Geological Cong, New Delhi, 14-22 Dec
1964.

LEBEDEV, I.V., otv.red.vypuska; KAS'YANOV, M.V., glavnyy red.;
GURARI, F.G., zamestitel' glavnogo red.; AMSHINSKIY, N.N., red.;
ARUSTAMOV, A.A., red.; DERBIKOV, I.V., red.; KAZARINOV, V.P.,
red.; KALUGIN, A.S., red.; MALIKOV, B.N., red.; MIKUTSKIY, S.P.,
red.; ROSTOVTSEV, N.N., red.; SUKHOV, S.V., red.; TESLENKO, Yu.V.,
red.; UMANTSEV, D.F., red.; SAFRONOVA, I.M., tekhn.red.;
RAGINA, G.M., vedushchiy red.

[Biostratigraphy of Mesozoic and Tertiary sediments in Western
Siberia] Biostratigrafiia mezozoiskikh i tretichnykh otlozhenii
Zapadnoi Sibiri. Moskva, Gostoptekhizdat. Vol. 1. 1962. 590 p.
Vol. 2. [Atlas of paleontological plates and their explanations]
Atlas paleontologicheskikh tablits i ob"iasneniia k nim. 1962.
128 plates. (Its Trudy, no.22). (MIRA 17:4)

ROSTOVTSEV, N.N.

Basic characteristics of the geology and oil and gas potentials
of the West Siberian Plain. Trudy VNIGRI no.132:85-92 '59.
(MIRA 17:1)

ROSTOVTSEV, N.N.

Tectonic plan of the West Siberian Plain on the platform floor
of Mesozoic and Cenozoic sediments with paleotectonic elements.
Trudy SNIIGGIMS no.7:30-39 '61. (MIRA 16:7)

(Geology, Structural--Maps)
(Petroleum geology)
(Gas, Natural--Geology)

ROSTOVTSEV, N.N.

Concerning F.G.Gurari, I.I.Nesterov, M.IA.Rudkevich's article
"Stratigraphy of Mesozoic and Cenozoic sediments in the West
Siberian Plain." Geol. i geofiz. no.4:122-123 '63. (MIRA 16:10)

GURARI, F.G.; KAZARINOV, V.P.; MIRONOV, Yu.K.; NALIVKIN, V.D.;
NESTEROV, I.I.; OSYKO, T.I.; ROVNIN, L.I.; ROSTOVTSEV,
N.N.; RUDKEVICH, M.Ya.; SIMONENKO, T.N.; SOKOLOV, V.N.;
TROFIMUK, A.A.; CHOCHIA, N.G.; ERV'YE, Yu.G.;
OMBYSH-KUZNETSOV, S.O., red.; LOKSHINA, O.A., tekhn.red.

[Geology and oil and gas potentials of the West Siberian
Plain, a new tank farm of the U.S.S.R.] Geologiya i nefte-
gazonosnost' Zapadno-Sibirskoi nizmennosti-novoi neftianoj
bazy SSSR. Novosibirsk, Izd-vo Sibirskogo otd-niia, 1963.
199 p. (MIRA 17:1)

AID P - 5389

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 19/28

Authors : Rostovtsev, N. E., and O. A. Sal'nikov

Title : Centrifugal chucks

Periodical : Stan. i instr., 9, 33-34, S 1956

Abstract : The authors give a brief description of three different types of gripping jaws, the draw-in chuck attachments designed and used by them in turret lathes. In addition they describe the centrifugal chuck attachment for heavy work on turret lathes. The latter chuck was designed by N. P. Kugutov, engineer of the Irbit Motorcycle Plant. Three drawings.

Institution : As above

Submitted : No date

RESTOVSEV, P.

RESTOVSEV, P. "Doors and walls of air", (the use of aerial screens), illustrated by S. Vetrusab, Tekhnika - molodezhi, 1948, No. 12, p. 13.

SO: U-2888, 12 Feb. 51, (Letopis' Zhurnal 'nykh Statey, No. 2, 1949).

ROSTOVTSSEV, P.Z.

4433. INCREASING SIZE OF BOILER INSTALLATIONS IN CONSTRUCTION OF CITY DWELLINGS. Rostovtsev, P.Z. (Za Ekonomiyu Topliva (Fuel Econ.), 1949, (7), 164). (L).

ALU 11 A METALLURGICAL LITERATURE CLASSIFICATION

ALU 11 A	ALU 11 B	ALU 11 C	ALU 11 D	ALU 11 E	ALU 11 F	ALU 11 G	ALU 11 H	ALU 11 I	ALU 11 J	ALU 11 K	ALU 11 L	ALU 11 M	ALU 11 N	ALU 11 O	ALU 11 P	ALU 11 Q	ALU 11 R	ALU 11 S	ALU 11 T	ALU 11 U	ALU 11 V	ALU 11 W	ALU 11 X	ALU 11 Y	ALU 11 Z

1. ROSTOVTSEV, F.Z.
2. USSR (600)
4. Electric Power Plants
7. Industrial steam turbine electric power plants, V. N. Yurenev, Sov. kniga, No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

BORODIN, Aleksandr Mikhaylovich; RODIN, Anatoliy Rodionovich;
ROSTOVTSEV, S.A., red.; CHUGUNOVA, Z.S., red. izd-va;
VDOVINA, V.M., tekhn. red.

[Manual for workers in forest plantations] Spravochnik rabo-
chego po lesnym kul'turam. Moskva, Goslesbumizdat, 1962. 131 p.
(MIRA 16:2)

(Forests and forestry)

ROSTOVTSEV, Semen Ivanovich.

Laboratory manual on plant anatomy Izd. 5. Moskva, Sovetskaia nauka, 1948. 275 p.

1ST AND 2ND ORDERS																										1RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
BC Reducibility of KMA (Kurek Magnetic Anomaly) ore. S. T. BARTOVICH, F. S. TARANOV, and J. E. PONTUKHO (Domes, 1933, No. 9, 36-57).—Crushed, reduced ore was heated in a current of H₂ under definite conditions; the average reducibility was 86.3-94.0%. Ch. Ann 5 I 5																																																			
A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION																																																			
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Ca 9

Agglomeration of Krivorog ores. The Kirov plant. S. T. Kostovtzev, S. M. Meerov and G. I. Demin. *Isk. i Prom. Met.* 1936, No. 1, 37-52. Tests were conducted with ores of 0-5 mm. and 0-12 mm. and contg. SiO_2 4.52-13.04, Fe 65.32-68.22, H_2O 4.1%. Charge should contain 5-6% C to give a mechanically stable product. A vacuum of 1000-1200 mm. H_2O was maintained and the amt. of air pumped was over 3000 cu. m. Instead of 1200 tons, the standard machine gave 1650-1670 tons of agglomerate per 24 hrs. B. Z. Kamach

ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

Ignition of a charge in a Dwight-Lloyd machine. S. T. Roshvitzky and S. M. Meerov. *Teoriya i Prakt. Met.* No. 3, 1922(1930). Various mixes. of coke-oven and blast-furnace gases were used. The best mixt. consists of 40% coke-oven and 60% blast-furnace gas. The former may be reduced by more proper mixing of gas and air. The total heat from ignition should be 3700 cal. (but not below 3000 cal.) per ton of agglomerate. The vacuum in the first chamber should be 600-650 mm. water.

R. Z. Kamich

ASB-51.4 METALLURGICAL LITERATURE CLASSIFICATION

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The chief problems of agglomeration. S. I. Rostovskiy and S. M. Mestrov. <i>Tekhn. i Prakt. Met.</i> No. 6, 3-12 (1937); cf. C. A. 31, 6354. One of the chief problems confronting the agglomeration industry is the selection of the upper limits of ore size. The tendency in some of the largest plants was to use ore over 12 mm. and even as high as 30 mm. The use of such sizes impairs the quality of the agglomerate. In the agglomeration of Krivorog ores the size should not be over 10 mm. In addition, the charge should contain at least 30-35% of fine dust. B. Z. K.																																																			
AS A S. L. A. METALLURGICAL LITERATURE CLASSIFICATION																																																			

CP

9

Physical principles of sintering Krivoi Rog iron
ores. S. Rostovtsev. *Tekhn. Prikl. Met.* 1038, No. 6,
3-9; *Met. Abstracts (in Metals & Alloys)* 10, No. 2, 82
(1969).—A wide range of sintering mixts. was studied mi-
croscopically and chemically. With ores carrying 8-10%
SiO₂ and a fuel content of 4.5-5.5%, only 1/4-1/2 of the
SiO₂ present forms Fe silicate, so that the high reducibility
of the ore is retained. The Fe₂SiO₄ reaction is reversible
and the silicate decomposes partially under oxidizing con-
ditions. Fuel particles larger than 3 mm. are disadvan-
tageous, particularly in sintering poor ores. Ore fines also
exert a detrimental action, particularly with poorer ores,
of which fines less than 0.5 mm. should be excluded. Par-
tial fusion of the sinter is required, but excessive fusion
lowers the quality of the sinter. C. L. B.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

CIA-RDP86-00513R0014454

1ST AND 2ND GROUPS										2ND AND 4TH GROUPS									
Some questions on the permeability of the agglomeration layer to gases. S. T. Rostovskiy, <i>Teoriya i Prakt. Met.</i> 10, No. 4, 13-19 (1938); <i>Chem. Zentr.</i> 1938, II, 3502; cf. <i>C. A.</i> 32, 60801. The formulas of Meerov (cf. <i>Teoriya i Praktika Met.</i> 1936, No. 7) and Nikolaev (cf. <i>Sovet. Met.</i> 7, No. 3, 19-21 (1935)) are critically discussed. The relation between the resistance of the layer or bed and the amt. of air is not to be deduced from the permeability of the former because it depends on the operation of the exhausters. Practically, if the variations in pressure are proportionately slight, the vacuum required to draw a definite amt. of air through can be regarded as directly proportional to the thickness of the layer, although as a matter of fact the necessary increase in vacuum somewhat exceeds the increase in the depth of the layer. M. G. Moore																			
COMMON SUBJECTS INDEX																			
COMMON LITERATURE INDEX																			
OPEN MATERIALS INDEX																			
AS A - S L A METALLURGICAL LITERATURE CLASSIFICATION																			
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1ST AND 2ND GROUPS										2ND AND 4TH GROUPS									

Rostovtsev, S. T. *Theory of Metallurgical Processes*. [In Russian.] 1944.
Moscow : Metallurgizdat Publishing House.

1ST AND 2ND CODES																										3RD AND 4TH CODES																									
PROCESSES AND PROPERTIES INDEX																																																			
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53. Theory of Metallurgical Processes. S. T. Rostovtsev. 307 pages. 1948. State Publishing House for Ferrous and Nonferrous Metallurgy, Moscow. (In Russian.) Textbook emphasizes the thermodynamic investi- gation of metallurgical reactions. Since the inves- tigation of the kinetics of metallurgical processes is in its initial stages, the author introduces his own theories and methods of solution for a series of problems on some of the simpler metallurgical processes. Included are: the application of physi- cal chemistry to metallurgical processes; combus- tion theory; the system iron-oxygen; slag proper- ties and systems; reduction theory; oxidation smelting; and desulfurization and dephosphoriza- tion of metals.																																																			
AS 53.51 A METALLURGICAL LITERATURE CLASSIFICATION																																																			
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ROSTOVTSOV, S. T.

USSR/Metallurgy - Iron Ores, Ferrous 1 Nov 53
Reduction

"Kinetics of the Low-Temperature Reduction of Iron
Ores. Reduction of Chemically Pure Ferric Oxide
with Hydrogen," S. T. Rostovtsev, A. P. Yem

DAN SSSR, Vol 93, No 1, pp 131-134

Disputes generally accepted assumption that low-
temp reduction of Fe_2O_3 with gases is two-stage
process without formation of FeO-phase. Exptly
establishes three-stage character of reduction
process even at temps as low as $300-400^\circ$,

275T50

substantiating this finding by results of x-ray
study of partially reduced Fe_2O_3 specimens. Pre-
sented by Acad I. P. Bardin 21 Aug 53.

ROSTOVTSEV, S.T.

Journal of the Iron and Steel Inst.
June 1954
Blast-Furnace Practice and Production
of Pig Iron

Kinetics of Low-Temperature Reduction of Iron Ores—The Reduction of Synthetic and Natural Iron Ores with Hydrogen. S. T. Rostovtsev and A. P. Em. (Doklady Akademii Nauk S.S.S.R., 1953, 93, (2), 329-334). [In Russian]. Kinetics of the low-temperature reduction of samples of (a) natural high-grade iron ore (Krivoi Rog), cut into slabs, (b) the same ore crushed and compressed into slabs, (c) chemically pure Fe_2O_3 heated before reaction to various temperatures, and (d) synthetic ores containing various gangue materials were investigated. The kinetics of reduction of finely crushed rich ore do not differ from that of chemically pure ferric oxide. At temperatures below the point of eutectoid decomposition of FeO , the reduction proceeds in three stages through the metastable ferrous oxide phase. During the reduction of ore in its natural crystalline state the kinetics of the process are different. On the curve for the dependence of reduction rate on time or degree of reduction, the signs of the existence of three separate stages of the process are absent. This apparent change in the kinetics of reduction is explained by the low adsorption capacity of the ore. Fine crushing of ore with subsequent briquetting considerably increases the velocity of reduction. The presence of gangue materials (SiO_2 , Al_2O_3 , and CaO) only slightly decreases the velocity of reduction without changing the character of the process.—V. G.

PHASE I BOOK EXPLOITATION

662

Rostovtsev, Sergey Tikhonovich

Teoriya metallurgicheskikh protsessov (Theory of Metallurgical Processes)
Moscow, Metallurgizdat, 1956. 515 p. 6,000 copies printed.

Reviewers: Yesin, O. A., Doctor of Technical Sciences, Professor; and
Kondakov, V. V., Doctor of Technical Sciences, Professor; Ed.:
Kazachkov, Ye. A.; Ed. of Publishing House: Sharopin, V. D.; Tech. Ed.:
Vaynshteyn, Ye. B.

PURPOSE: This book is intended for metallurgical engineers and may also be
used as a textbook by students at metallurgical institutes.

COVERAGE: The author explains the physico-chemical principles of metallurgical
processes. On the basis of the most important groups of metallurgical pro-
cesses carried out for the purpose of obtaining or converting ferrous metals,
the subject matter is broken down as follows: dissociation and formation of
carbonates, oxides, and sulfides; combustion processes; iron-carbon melts and
metallurgical slags; reduction processes; oxidation of addition agents in

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